

# STATE OF SOUTH CAROLINA

Class Code       **AJ09**  
Class Title       **Senior Software Engineer**

Band    08

## General Nature of Work:

Performs the independent analysis, development, testing, implementation and maintenance of the most complex Web, mainframe, or client server technologies.

## Guidelines for Class Use/ Distinguishing Characteristics:

Positions in this class assume highly complex, expert-level technical duties in software design and development. Employees in this class typically serve on extremely complex projects. Some positions may have supervisory responsibilities.

## Examples of Work:

Utilizes the most complex Web, mainframe, or client server technologies in the development, testing, implementation and maintenance of complex computer systems.

Participates in the preparation of needs assessments, planning documents, RFPs, budgets, and project reports.

Performs independent analysis of user needs and recommends solutions.

Assists in workshops, coordinating with multi-program end-users and management, tracking user acceptance and designing testing/training.

Coordinates with users in developing new systems or modifying existing systems.

Actively participates in the use of the State Project Management Methodology or approved State agency methodology, which includes project documentation, planning, scheduling, change management, resource allocation, communication, budgeting, quality and risk management, and requirements tracking.

Prepares and delivers professional quality written and oral reports to staff, end-users, and management.

Develops comprehensive technical documentation and user manuals.

Researches, designs, writes, and tests new software programs.

Modifies existing software to correct errors, to adapt it to new hardware, or to improve its compatibility or performance.

Investigates new technologies and determines appropriate technologies to pursue.

Analyzes user needs and software requirements to determine feasibility of design, technical specifications, and test plans within time and cost constraints.

Confers with project managers, graphic artists, systems analysts, programmers, sales and marketing professionals and others on technical issues such as system design, limitations and capabilities, performance requirements, interfaces and maintenance.

Coordinates software system installations and monitors equipment functionality to ensure specifications are met.

Continually updates technical knowledge and skills by attending in-house and/or external courses, reading manuals and accessing new applications to keep up with rapid advancements in information technology.

*Note: The examples of work listed in this class specification are not necessarily descriptive of any one position in the class. The omission of specific statements does not preclude management from assigning specific duties not listed herein if such duties are a logical assignment of the position. The intent of the listed examples is to give a general indication of the levels of difficulty and responsibility common to all positions in this class.*

### Knowledge Skills and Abilities:

In-depth knowledge of computer system analysis, design, testing, debugging and maintenance techniques.

Extensive knowledge of computer programming languages.

Extensive knowledge of management skills and techniques.

Ability to prepare technical reports in a clear and concise manner.

Ability to work effectively with users, vendors and staff members.

Ability to plan, direct, instruct and review the work of technical personnel.

Ability to solve problems and apply critical thinking skills to complex problems, both individually and as part of a team.

*Note: The knowledge, skills and abilities listed are not necessarily inclusive of the requirements for every position in the class.*

### Necessary Special Requirements:

#### Minimum Requirements:

A bachelor's degree in computer science or related field and experience in computer system development and modification.

*Note: Additional requirements may be applicable for individual positions in the employing agency.*